

## Architectural Panels

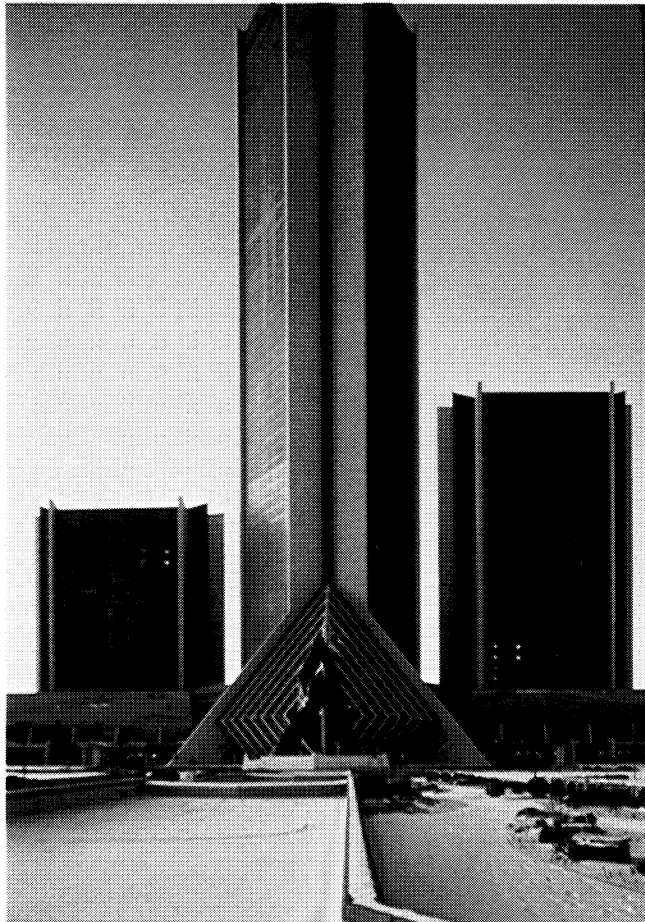
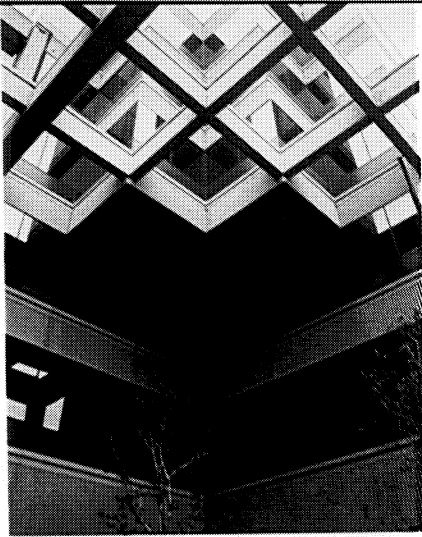


Photo by Don Klump

In the upper photos, youngsters are daubing paint and affixing magnetic shapes to their schoolroom wall at a Kinder Care Learning Center. But the wall panels will suffer no damage. They are Whyteboard porcelain enamel on steel panels, manufactured by AllianceWall® Corporation, Okmulgee, Oklahoma. Removal of the magnetic figures will not scar the panels and the paint can be removed without a trace by a wipe of a damp cloth. This feature of Whyteboard, allowing children to write, paint, draw and clip on the walls, gave Kinder Care centers a new dimension. It was, however, just one of several reasons why Kinder Care, the largest preschool child care organization in the U.S., decided to use Whyteboard in its centers.

Kinder Care faced a problem of very high maintenance costs at the centers, due to frequent need for new paint and wallpaper. Construction managers sought a better interior material for building new centers and remodeling old ones, an economical material that would require little maintenance yet would meet the varying local, state and regional fire codes. They found it in AllianceWall's Whyteboard, which eliminates painting and wallpapering and is virtually maintenance free, capable of resisting scratches, smudges, stains and fading of its hard-as-glass surface. Kinder Care has specified Whyteboard for all its new centers and for selected remodeling projects.

Whyteboard is one of a number of types of panels manufactured by AllianceWall, the world's largest producer of architectural porcelain on metal. In



addition to interior panels, widely used in such applications as classrooms, offices, conference rooms and corridors, the company supplies a variety of exterior porcelain enamel on steel products that offer similar advantages: no chipping, scratching, heat blistering; colors won't corrode, oxidize or fade, so refinishing is never needed; graffiti and other blemishes can be easily wiped off with solvents or paint removers without harm to the surface.

Some examples of exterior applications are shown in the accompanying photos. At left, 225,000 square feet of AllianceWall porcelain-enameled steel provide a maintenance-free exterior for the City of Faith Medical and Research Center on the campus of Oral Roberts University, Tulsa, Oklahoma. At left top, AllianceWall panels enhance the unusual design of the 4040 Broadway Building, San Antonio, Texas. Below it is the Paragon Building, Houston, Texas and at right above is Wayne County Community College, Detroit, Michigan.

Among the factors that have won AllianceWall a worldwide customer base are the wide range of colors available and the color stability maintained in the enameling process. Through Kerr Industrial Applications Center (KIAC), NASA provided assistance that helped AllianceWall improve its color stability. Located on the campus of Southeastern Oklahoma State University, KIAC is one of 10 NASA sponsored dissemination centers that provide information and technical help to industrial and government clients.

In the AllianceWall enameling process, finely milled glass frit is combined with various oxides to give the

desired color and texture to the porcelain enamel surface, which is guaranteed to resist color fading and is virtually unaffected by ultraviolet rays, acid rain or weather. To maintain color stability, AllianceWall wanted to improve on its visual methods of detecting flaws, matching colors and measuring gloss; the company sought an advanced method of detecting color/gloss changes and establishing quantitative tolerances. AllianceWall asked KIAC to conduct a worldwide engineering background study to identify potential technologies and manufacturers of equipment that could be used to detect surface flaws, color and gloss changes on enameled surfaces.

KIAC ran computer searches of three data bases, including NASA's, and provided AllianceWall 77 pertinent reports. The information resulted in company purchase of a spectrophotometer manufactured by Hunter Laboratories; above top, AllianceWall's Sue Edmonds displays samples of the color panels and part of the colorimeter system, which can "read" colors from a color chip or continuous strip and provide information for reproducing the exact tone and shade. The equipment enables AllianceWall to control some 250 standard colors and match any special color a customer might want. KIAC also provided information on laser and ultrasonic equipment that can detect surface flaws—such as trash, bubbles or depressions. AllianceWall plans to put such equipment into service for further improvement of its product line.

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